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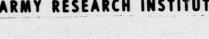
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Development of the Instructor Orientation Course for the Army ROTC Management Simulation Program

by

R. A. Dapra and W. Byham *Inc*
DEVELOPMENT DIMENSIONS, ~~INTERNATIONAL~~

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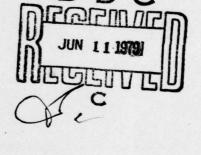M. G. Rumsey and R. S. Wellins
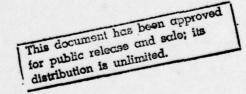ARMY RESEARCH INSTITUTE

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report describes the development and testing of the Instructor Orientation Course(IOC), which was designed to accompany the Army ROTC Management Simulation Program(MSP). A field test of the MSP, an instructional package directed toward developing management skills, had revealed the need for training instructors in this new type of material. Consequently, a training program was developed to: (1) provide instructors of the MSP with an opportunity to experience the program from a student perspective and (2) develop critical instructor competencies relevant to each component of the MSP. ⟶

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    The IOC consists of a videotape and a series of audiotapes and workbooks. A two-phase evaluation involving one instructor from each of sixteen schools was conducted to determine whether the IOC met its objectives. The videotape, audiotapes and workbooks were all evaluated favorably. A number of apparent deficiencies were identified in the course of the evaluation, resulting in modifications to the IOC before it became fully operational.

FOREWORD

The Army Research Institute for the Behavioral and Social Sciences (ARI) has, as part of its mission, provided R&D support to the Army Training and Doctrine Command (TRADOC) in its training mission over the years. Part of the ARI effort, in the Personnel and Manpower Technical Area, has been to research new and more effective approaches to developing officer leaders.

Earlier ARI research on officer leadership revealed that skill factors could be meaningfully considered as composed of two domains: attributes associated with effective combat leaders and those associated with effective technical-managerial performance. This research has provided guidance for several advanced development efforts including new officer training approaches. ARI Technical Report TR 76-A5 described research conducted to develop a performance-based program to teach Army ROTC cadets basic management skills. The present report describes the development and testing of a training course for instructors using this program. Research was conducted under RDTE Program 2Q763731A768, FY 1978 Work Program, and is responsive to the special requirements of the Deputy Chief of Staff/ ROTC, TRADOC.

JOSEPH ZEIDNER
Technical Director

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SUBJECT: Development of the Instructor Orientation Course for the Army ROTC Management Simulation Program (Contract DAHC 19-77-C-0021); Final Technical Report

BRIEF

The Instructor Orientation Course (IOC) is a self-contained instructional program designed to develop the skills required to effectively teach the Army ROTC Management Simulation Program (MSP). The MSP is a modular instructional package which provides ROTC cadets the opportunity to apply and develop basic management skills in realistic, simulated situations. The development of the MSP is described in detail in ARI Technical Report TR-76-A5, November, 1976, Development of the Army ROTC Management Simulation Program.

A field test of the MSP revealed the need for training instructors in this new type of material. Consequently, a training program was developed with the following objectives:

- To provide an opportunity for potential instructors of the MSP to experience the program from a student perspective by actually responding to each exercise and all materials in the program.

- To provide an opportunity to develop critical instructor competencies relevant to each component of the MSP by providing instructional models and/or skill practice relevant to each competency.

During workshops attended by prospective MSP instructors, competencies required to effectively teach the MSP were identified. Once identified, these competencies became the basis of the instructional system consisting of a videotape which provided an introduction to the MSP and a series of audiotapes and workbooks to assist instructors in understanding and teaching the individual modules.

Since the IOC used a new instructional approach, it was necessary to determine if the course met its objectives. Therefore, a two-phase evaluation was designed and implemented. In the initial phase, eight schools participated in a phone survey which was planned as a means of identifying major problems that could be remedied prior to the final, second phase. The second phase evaluation, in which instructors from the original eight schools and eight additional schools participated, was designed to provide, by means of questionnaire data, an assessment of the revised IOC package as well as identify any remaining deficiencies.

Results of the evaluation revealed that instructors found the videotape information interesting and of high quality. After seeing the tape, most instructors highly recommended the MSP be incorporated into their ROTC curriculum. The audiotapes were rated as effective

in preparing instructors to teach the MSP. Lastly, the workbooks were evaluted as useful in developing the teaching competencies required to teach the MSP. A number of apparent deficiencies were identified in the course of the evaluation, resulting in modifications to the IOC before it became fully operational.

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INTRODUCTION

The Army ROTC Management Simulation Program (MSP) is an instructional
package designed to aid in teaching management concepts to ROTC
students. The program was conceived and developed to not only improve
the quality of management instruction but to help establish the rel-
tionship between two important military and civilian concepts --
leadership and management. Since the successful leader in any mili-
tary or civilian organization must also be an effective manager, the
MSP was designed to provide development in the interpersonal and man-
agement skill areas which underlie effective leadership.

The MSP is a modular instructional package which provides ROTC
students with the opportunity to apply and develop basic management
skills in realistic simulated situations. The types of exercises
(simulations) used in the MSP have also been used extensively to iden-
tify management potential through the assessment center method. This
method utilizes a system of simulations to elicit behavior relative to
specific management skills. The simulations depict actual situations
with which managers are confronted. While individuals in the
assessment center participate in the simulations, trained evaluators
observe, record, classify, and evaluate their behavior relative to the
targeted management skills. The assessment center method provided a
model for the development of a performance-based instructional program
consisting of the following four modules:

> Module I   Management Problem Analysis and
> Decision Making
>
> Module II   Management Planning and Organizing
>
> Module III Management Delegation and Control
>
> Module IV   Interpersonal Skills Required for
> Effective Management

The development of the MSP included field testing by both the de-
veloper and ROTC instructors. ARI Technical Report TR-76-A5, November
1976, Development of the Army ROTC Management Simulation Program,
provides a comprehensive description of the development, field testing
and evaluation of the program.

The Instructor Orientation Course (IOC) is an instructional program
designed to develop instructor skills required to effectively teach
the MSP. It was designed and developed in response to needs iden-
tified by the ROTC instructors who participated in the field testing

of the MSP. The instructors indicated their ability to effectively use the program materials in their respective classes was increased by having attended a three-day instructor workshop conducted prior to the field test by the developer. The workshop was seen as having provided both a student perspective of the program and the necessary instructor skills. The ROTC instructors participating in the field test were consistent in their recommendations that a comparable instructor training program was necessary prior to others attempting to use the MSP.

Since the MSP represented a nontraditional and relatively complex instructional approach, the need for an instructor training program created a challenging research and development opportunity. An effective program would be required to encompass the following:

(1) Overcome resistance to a new mode of instruction
(2) Provide a student perspective of the program materials and requirements
(3) Develop instructor competencies relative to the attainment of the instructional objectives for each major component of the program.

In addition, an instructor training program had to be cost-effective, easy to administer, and minimally time consuming for prospective instructors.

In response to the criteria described above, the Instructor Orientation Course (IOC) was designed as a self-paced instructional program which would use a combination of videotapes, audiotapes, and workbook activities to guide and clarify learning activities. The following instructional objectives were specified for the IOC to insure the development of instructor skills and confidence to teach the MSP:

(1) To provide an opportunity for potential instructors of the Management Simulation Program to experience the program from a student perspective by actively responding to each exercise and all materials in the program.

(2) To provide an opportunity to develop critical instructor competencies relative to each component in the Management Simulation Program by providing instructional models and/or skill practice relative to each competency.

PROGRAM DEVELOPMENT

Instructor Workshops

The first phase of program development focused on the identification of the instructor competencies required to teach the MSP. Although

the evaluation instruments completed by the ROTC instructors who participated in the field testing of the program addressed administrative problem areas, information provided was insufficient to identify instructor competencies/skills. Therefore, the objective of the initial program development activities was to collect specific behavioral information relative to instructor skills required to teach each component of the program and to determine the most effective methods for developing the skills. Since the instructor workshops conducted prior to the field testing of the MSP provided considerable information and insight to the developer as well as the instructors, it was decided that additional workshops would be the best source of the behavioral information required to identify critical instructor competencies.

A three-and-a-half day instructor workshop was designed to address the components of the MSP from both the student and instructor perspective. Two workshops were conducted during March and April of 1977 for approximately 30 instructors. During the workshops the developer presented each component of the MSP to the prospective instructors and required their participation as students. They received lecturettes, worked on exercise materials both individually and in small groups, and presented the results of their activities to the total group. These activities were designed to provide the instructors with the same initial insight into the program materials as their students. All workshop activities were either audio or videotaped so responses could be used as a source of data for the development of evaluation instruments, instructor response models or other instructional aids.

Once the student perspective for a specific component of the MSP was achieved, participants addressed the instructional skills required to effectively teach that component. Participants read the appropriate portion of the MSP Instructor's Manual, clarified the objectives of the activity and discussed instructor requirements. Considerable time was spent identifying the types of activities and instruments which would best develop the essential skills required for effective instruction.

The instructor workshops generated a wealth of information relative to the design and development of the IOC. Workshop participants concurred with the basic objectives of the IOC and provided a number of ideas on alternative approaches for presenting and implementing the IOC. In addition to this information gathering objective, the workshop provided the opportunity to train 30 ROTC instructors who could use the MSP in their respective schools as soon as they desired.

Competency Identification

The information generated in the instructor workshops was analyzed to identify the critical instructor competencies to be addressed in the

IOC. Initially, a long list of competencies was generated for each component in the MSP. The list included competencies related to the administration of an exercise, general presentation techiques, content knowledge and specified instructional skills. Since the IOC was not to address long lists of competencies nor be redundant with the previously developed MSP Instructor's Manual, identification of the critical competencies was necessary. The following questions were used to help determine whether the competency was to be addressed in the IOC:

- Was the competency less than adequately addressed in the MSP Instructor Manual?

- Was the competency identified as particularly important and/or difficult in the instructor workshops?

- Did the competency relate to instructor skills/knowledge most ROTC instructors would not possess?

If a particular competency elicited an affirmative response to one or more of the questions delineated above, it was identified as one which should be addressed in the IOC. The data from the instructor workshop was weighed very heavily in making the determination, and it was found that many of the critical competencies elicited affirmative responses on more than one question. The following examples are representative of those competencies identified for specific instructional components of the MSP:

Lecture/Text Materials for Problem Analysis and Decision-Making

- Knowledge of the definitions of problem analysis and decision-making.
- Ability to use the examples in the text to illustrate the essential elements.
- Ability to illustrate the difference between breadth and depth of questioning.
- Ability to illustrate the difference between judgment and decisiveness.
- Ability to discuss the factors to be considered in the decision to include others in the decision-making process.

Group Fact-Finding Exercise

- Ability to effectively communicate the concepts of breadth and depth of questioning as they relate to the fact-finding process in essential element No. 2.

- Ability to use the Background Material provided for the instructor in Appendix B of the Instructor's Manual to relate the concepts of breadth and depth of questioning to the student responses.

Office Fact-Finding Exercise

- Ability to respond to students' questions as a resource person.
- Ability to discuss and illustrate the self-scorer.

Judgment Exercise

- Knowledge of the objectives and content materials of the exercise.
- Ability to critique student decisions and presentations relative to the targeted essential elements.

Decisiveness Exercise

- Ability to discuss the distinction between decisiveness and judgment.
- Ability to effectively conduct the group discussion of each vignette in the exercise.

Competency identification was completed during May 1977.

Development of an Audiotape - Workbook Instructional System

The basic objective underlying the development of the IOC was to provide instructor skills to effectively teach the MSP through a cost-effective, easy to administer, self-contained program. An integrated audiotape and workbook instructional system most readily met those criteria. Simultaneous development of the audiotape scripts and the workbooks was required to ensure the continuity and comprehensiveness of the materials. In addition, the program materials for the MSP (e.g., student materials and the Instructor Manual) were integrated into the system. The majority of the tape scripting and workbook development took place during the period from June through November 1977.

Audiotapes were developed to guide the learning for Modules I, II, III and IV and had the following objectives:

- To provide an overview of each module.
- To provide specific directions for responding to the student materials.
- To discuss the objectives of the exercises in the student materials and illustrate typical student responses.
- To delineate and discuss critical instructor competencies.
- To discuss and critique competency development activities.
- To clarify the role of the instructor in administering the student activities.

Instructor workbooks were developed to be used in conjunction with the

audiotapes. It was determined that only Modules I, II and III required a workbook, while Module IV and the Evaluation Materials did not. This decision was predicated on the fact that the student materials for Module IV were already in a format which could be used effectively with the audiotape. The evaluation materials were unique and were adequately addresssed in the Instructor's Manual. The Instructor Workbooks were designed to accomplish the following objectives:

- To provide the student materials for the instructor to study.
- To provide a format for the instructor to respond to student materials.
- To provide an opportunity for self-evaluation of responses to student materials.
- To provide activities to aid in the development of instructor competencies.
- To provide an opportunity for self-evaluation of the competency development activities.

The integration of the audiotape and workbook objectives yielded the following general sequence and mode of instruction for each component of the MSP:

Audiotape   Instructor Workbook

Step One:

    a. Provide the overview and/
       or lecturette for the
       exercise.
    b. Provide specific directions
       for responding to the
       exercise.

Step Two:

    a. Provide format for
       instructor to
       respond to exercise
       material.
    b. Provide opportunity
       for self-evaluation
       of responses to
       exercise.

Step Three:

    a. Discuss objectives of the
       exercise and typical student
       responses to the exercise.
    b. Delineate critical instruc-
       tor competencies.

Step Four:

    a. Provide activities
       to aid in the
       development of
       instructor
       competencies.
    b. Provide an
       opportunity for
       self-evaluation
       of competency
       development
       activities.

Step Five:

    a. Discuss and critique compe-
       tency development activities.
    b. Provide a model of an instruc-
       tor conducting the exercise and
       illustrating the competencies.
    c. Summarize the exercise from the
       instructor perspective.

Videotape Production

The need for an introductory videotape was identified early in the program development sequence. Each of the Instructor Workshops began with an hour-and-a-half overview of the MSP which included a discussion of the program objectives, the instructional components and a detailed program description. Workshop participants and project staff strongly suggested that an introductory videotape designed to coincide with the overview presented in the live workshops would be extremely helpful to a prospective instructor who knew very little about the MSP.

Although there was a consensus relative to the need for an introductory videotape on the part of the project personnel from DDI, TRADOC, and ARI, it was difficult to clearly define a single objective for the tape. Rather, a number of objectives were identified including use of the videotape to encourage use of the MSP, to provide detailed introduction to the MSP, and to provide instructional models to which instructors would be referred during audiotape or workbook activities. Since all of the objectives were related, it was decided to attempt to address all three in the development of the videotape.

The tape was scripted by the developer and produced at Ft. Devens, Massachusetts, during the fall of 1977. The resultant tape was 58 minutes long. It included a discussion of the program objectives, the instructional components and a detailed description of the program. The program activities were illustrated by filming simulated classroom scenes which showed an instructor interacting with his cadets as he taught specific components of the MSP.

Developer's Test

A three-and-a-half-day Developer's Test was conducted in November, 1977 to aid in the refinement and further development of the IOC materials. Five ROTC instructors who had minimal exposure to the MSP and had not taught the program participated in the test along with five experienced instructors who had been part of the initial MSP field test group. The instructors were required to view the introductory videotape and complete the IOC materials (audiotapes and workbooks) for each of the four modules in the MSP. After completing the materials for each component, the groups would critique the effectiveness of the IOC materials as they related to providing the student perspective and developing the instructor competencies required to teach the given component of the MSP. The feedback process was highly structured and provided valuable information on which to make revisions in the IOC.

The feedback from the Developer's Test was evaluated to determine the specific effectiveness of the introductory videotape, the audiotapes, and the workbook activities as well as the overall design of the IOC. The introductory videotape was determined to be less than effective by both groups of instructors. They generally concurred that the tape was too long, presented excessive information, and the acting was not professional. The instructors agreed the tape attempted to accomplish too many objectives, i.e., promote, instruct, and inform. The consensus which evolved from the considerable discussion about the tape indicated the tape should be short, have high impact, and should be designed to sell the prospective instructor on the benefits of the MSP for his/her school.

The instructors concurred that the audiotapes should be designed to reinforce their learning activities in the IOC as well as prepare them for what would be required as they taught the MSP. Although the tapes were evaluated as reasonably effective, the instructors made a number of important suggestions to increase the effectiveness of the tapes. One recommendation on which the instructors concurred was that the length of the tapes should be shortened by decreasing the introductory lecture material. Since the lecture material on tape paralleled the material in the Instructor's Manual of the MSP, the instructors indicated the repetition was not necessary. They stressed the point that the audiotapes should amplify key concepts and provide explicit guidance for instructors responding to student questions and dealing with potential problem areas. The instructors characterized the tapes as necessary and valuable supplements to the instructor workbook activities.

Instructor feedback relative to the need for and the effectiveness of the instructor workbook activities was positive. The instructors generally agreed the workbook activities aided them in developing a student perspective of the program materials by providing a structured format for their responses as well as instruments to evaluate their responses. The major modification in the workbook activities suggested by the instructors was the addition of a self-test for the text materials in Modules II and III. The Module I instructor workbook contained a self-test which addressed the understanding of the key concepts in the module. The instructors found the self-test was effective for Module I and requested comparable activities be developed for Modules II and III. Several other minor modifications in the workbook activities were suggested, including a more detailed sequence of instructor activities.

Participating instructors provided a number of suggestions on the format and delivery of the IOC. However, they were in basic agreement that a self-paced program which used an integrated audiotape - instructor workbook format would be most desirable in the field. Such a format would allow for individual learning differences as well as

differences in organizational needs, e.g., one institution may want to use Module IV only while another would desire to use Modules I through III. Instructors indicated that in addition to its flexibility, the IOC was comprehensive and achieved its instructional objectives of providing a student perspective as well as instructor competencies.

Modifications Resulting from Developer's Test

In response to the information obtained during the Developer's Test, the next phase of program development (January to March, 1978) was devoted primarily to improving both the video and audiotape components of the IOC. The videotape was completely rescripted by the developer and produced at Fort Eustis. The result was a 12 minute tape which provided a comprehensive overview of the MSP including its instructional objectives, features, and benefits.

The audiotape scripts were rewritten to incorporate instructor suggestions as well as other data obtained during the Developer's Test. The modifications to the audiotape were completed in conjunction with the final changes in the workbook activities and instruments. The integration of the audiotapes and workbooks was completed to insure that the tapes reinforced the instructor learning activities as well as addressed potential classroom teaching problems. In addition, a detailed sequence of instructor activities was developed for each module. The sequence of instructor activities was designed to facilitate the administration of the IOC.

USER'S TEST: PROCEDURE AND RESULTS

Objectives and Design

The major objective of the Instructor Orientation Course (IOC) is to develop instructor skills required to effectively teach the Army ROTC Management Simulation Program (MSP). Since the IOC used a new instructional approach, it was necessary to determine if the course met its objectives. Therefore, a two-phase evaluation was designed and implemented by ARI, with assistance from Development Dimensions, International and TRADOC. In the initial phase, instructors representing eight ROTC schools participated in a phone survey which was planned as a means of identifying major problems that could be remedied prior to the final, second phase. Instructors from the original eight schools and eight additional schools completed questionnaires for the second phase evaluation designed to provide an assessment of the revised IOC package, as well as identify any remaining deficiencies.

Procedure - Phase One

Eight schools, distributed among the four ROTC geographical regions, participated in the first phase evaluation. An instructor designated to teach the MSP at each school was mailed a complete set of IOC materials. In addition, the eight instructors were each sent a copy of the evaluation survey containing questions identical to the ones which would later be asked during the interview. Approximately four weeks later, instructors were contacted by phone by two ARI project scientists and the IOC researcher from Development Dimensions International and asked a series of open-ended questions about the videotape, audiotape, and workbooks (see Appendix A). Instructors were also requested to send back to ARI any written comments they had on the IOC.

Procedure - Phase Two

The eight schools that participated in the Phase One evaluation plus eight additional ROTC institutions were selected for the Phase Two evaluation. A survey containing questions on the videotape, audiotapes, workbooks, and the IOC in general, was designed and then mailed to the 16 institutions (see Appendix B). The survey consisted of a series of five-point scale items and open-ended questions. On the five-point scales, "1" represented the negative extreme of the scale and "5" represented the positive extreme. Due to time limitations, two instructors were unable to complete Module III and four instructors were unable to complete Module IV in the Phase One evaluation. Therefore, to ensure that an ample number of instructors completed Modules III and IV in Phase Two, half the instructors were requested to begin their evaluation with Module IV and work backwards. Instructors were allowed approximately four weeks to complete the evaluation. Fourteen instructors returned the survey. Only one of these instructors was unable to finish evaluating Module IV.

The sample of instructors in Phase Two consisted of three lieutenant colonels, five majors, and six captains, averaging 13 years service. Ten instructors had previous educational background in the behavioral sciences, business or management. Four instructors had previous exposure to the MSP before they received the IOC materials and three of four of these instructors had already taught parts of the MSP.

Videotape Evaluation

Phase One: The open-ended survey for Phase One was divided into two categories. Evaluation of the videotape was covered by the first category of questions. The revised videotape had been designed primarily to provide a general overview of the Management Simulation Program and to motivate instructors to use it. The survey results indicated both objectives were achieved. Two instructors could not locate video equipment and consequently were unable to evaluate the tape. The remaining six instructors reported that the videotape was useful in presenting a general overview of the Army ROTC Management

Simulation Program and to motivate instructors to use it. Two instructors in fact recommended the videotape be shown to cadets about to go through the program. Based on the videotape, all six instructors recommended that the Management Simulation Program be used as part of the ROTC curriculum. For example, after viewing the tape, one instructor commented:

> "I feel that the Management Simulation Program is an effective vehicle for teaching the primary functions of management. I believe the cases and situations which are part of this course are effective in bringing out the main points of instruction in each module."

The videotape quality was generally acceptable; the instructors were pleased with the length, content and narration. Although there were a few minor criticisms, there were no indications of any major faults with the videotape. In fact, no two instructors voiced identical criticisms. Consequently, it was decided that the videotape should remain unchanged for the second phase of the evaluation.

Phase Two: The Phase Two evaluation of the videotape confirmed the findings of the Phase One evaluation. The mean ratings for the scale items on the videotape are contained in Table 1.

TABLE 1
Mean Ratings on Videotape Questions

Questions	Mean Rating*
1. Was the videotape informative in giving you a general overview of the MSP?	4.21
2. How interesting did you find the videotape?	3.71
3. How was the quality of the videotape itself?	4.21
4. Would you recommend the MSP now that you have the videotape?	4.36

*Ratings are based on a five-point scale with a 1 indicating a very negative response and a 5 indicating a very positive response.

Instructors found the presentation informative, interesting and of high quality. After seeing the tape, instructors highly recommended the MSP be incorporated as part of their ROTC curriculum. Averages on each of the five-point scale items were above 4. Twelve of the 14 instructors provided ratings of 4 or above on all four scaled items, with no more than one instructor rating less than 3 on any item. Thus, only one instructor found the videotape to be less than adequate.

Instructors were also asked to provide any general positive and negative comments on the videotape and make recommendations for change. Comments addressed to the overall quality of the videotape were generally positive. For example, one instructor wrote:

> "The videotape provides an excellent overview of the program. I found it to be an excellent vehicle to use as a briefing aid and in a presentation about the program given to the civilian faculty in the College of Business."

Although not all the comments were positive, most others concerned minor changes such as cadets wearing civilian clothes rather than Class A uniforms, and the use of more classroom scenes. However, these comments seemed more a matter of personal taste rather than actual fault in the videotape presentation. As in the first phase evaluation, no two instructors had the same criticisms of the videotape.

Audiotapes and Workbooks Evaluation

Phase One: In both the Phase One and Phase Two evaluations, a section of questions on the IOC audiotapes and workbooks followed the videotape items. In the telephone interviews constituting the Phase One evaluation, questions concerning the tapes and workbooks were to be repeated for each of the four modules as appropriate. However, since instructor's comments in the first few telephone interviews were fairly consistent across all modules, this format was quickly modified. In the remaining interviews, instructors were asked to thoroughly evaluate Module I and make additional comments on the remaining three modules only if they differed from their comments on Module I.

The instructors indicated that the audiotapes and workbooks were effective in preparing them to teach the four-module Management Simulation Program. They reported that IOC materials were useful in guiding them through the various simulations and helpful in teaching them the competencies and essential elements contained in each module. Instructors were also pleased with the recording quality, length of the audiotapes, and narration. Because of the consistently high evaluations of the audiotapes and workbooks, it was decided not to change them for the second phase of the evaluation. Although the second portion of Phase One revealed that the IOC was being generally well received, problems and suggestions for improvement did surface during the evaluation. Several problem areas and the decisions made concerning these problems are listed below:

1. The IOC contained a videotape, four workbooks, four audiotapes and a training guide. In addition, instructors were required to refer back to the four student modules and the previously published Instructor's Manual as they were taking the course. Five instructors complained that handling the volume of separate materials and switching back and forth between these materials was confusing and cumbersome.

Some discussion took place about the feasibility of combining the numeroous IOC materials into one or two complete units or packages. A decision on this matter was temporarily deferred until additional data could be gathered on this problem from the second phase of the evaluation. However, several specific questions addressed to this issue were included in the Phase Two evaluation.

2. Three instructors indicated that a business, management or behavioral science background would be helpful to those teaching the Management Simulation Program. One of these instructors mentioned that a reference list on management principles and theory might facilitate the acquisition of this background. Inclusion of a management bibliography was discussed at length. Again, it was decided to defer judgment until futher data could be gathered from the Phase Two evaluation. Two questions addressed to this issue were included in the Phase Two survey.

3. Several instructors had questions or comments on administrative issues such as optimal class or group size, time needed to complete certain simulations, required preparation time, and teaching modules independently. The developer pointed out that most of these issues were already discussed in the MSP Instructor's Manual. However, a question was added to the Phase Two evaluation asking instructors to list any further administrative aids they thought would be necessary to teach the MSP more effectively.

Thus, although no changes were made in the IOC, questions were included in the Phase Two evaluation which specifically addressed problems that surfaced during the Phase One evaluation. It was expected that answers to these questions would further delineate the problem areas so proper program changes could be made.

Phase Two: Instructors who participated in Phase Two were again asked to evaluate the IOC materials for each module separately. For Modules I through III, the survey contained a series of five scale items, an estimate of the time devoted to complete each module and one open-ended question. The items were identical for each of the first three modules. The questions for the Module IV evaluation were the same as the questions for the other three modules with the exception of two scale items concerning the workbooks which were omitted.

Table 2 contains the means for each item within each module. In addition, the last column of this table shows the mean for each question across all four modules. As can be seen in the table, responses were

generally very positive. The means, based on five-point scales, ranged from a low of 3.5 to a high of 4.43. Very little variation in the means was evident between modules; all modules were evaluated at the same high level. Individual instructors' ratings on the scale items almost all ranged from 3 to 5. Thus, the large majority of instructors were at least moderately impressed with the IOC materials for each module. In fact, only two instructors responded below a 3 on more than two of the 17 scale items.

Examining the data in Table 2 more closely, one can see the audiotapes were useful in guiding the instructors through the accompanying IOC materials for each module. In addition, the review of the essential management principles contained on the audiotapes was effective in helping the instructors prepare to teach the MSP.

The workbooks were designed to aid in developing teaching competencies and familiarize instructors with the student materials for each module. From the mean responses to items three and four presented in Table 2, it would appear the workbook was effective in accomplishing both these goals. The major objective of the workbook and audiotapes together was, of course, to help instructors prepare to teach the MSP. The data summarized in Question 5, Table 2, clearly indicates these two components of the IOC were highly effective in preparing instructors to teach the MSP. In fact, the mean response to Question 5 was above 4.0 for all three modules.

Since the IOC was a new program of self-instruction, it was important to find out how long it took instructors to complete each module. This information could serve as a guide for those who plan to teach the course in the future as well as assure the developer that the IOC was not excessively long. The average time it took instructors to complete each of the four modules is displayed in Table 2, Question 6. Instructors spent an average of 6.12 hours preparing to teach each module. It took instructors longer to complete Module I and less time to complete Module IV in comparison to the other two modules. This was to be expected since the Module I audiotape was longer and the workbook exercises more numerous than their counterparts in Modules II and III, and since no workbook exercises accompanied Module IV.

Lastly, instructors were asked to provide written comments on the IOC materials for each of the modules. Again, the criticisms were minor and inconsistent among instructors. There were, however, several lengthy postive comments. For example, one instructor wrote:

> "This module was well prepared and will provide the cadet and future second lieutenant with valuable information. I particularly liked the management control exercise. It gives the cadet a very good example of management control. Additionally, I felt the Manager's In-basket Exercise is a valuable tool in preparing a cadet for coordinating activities, a valuable thing to learn for future staff work."

TABLE 2

Module Evaluations

	Mean*				
	Modules				All Modules
Question	I (n=14)	II (n=14)	III (n=14)	IV (n=13)	
1. Usefulness of audiotape in providing guidance	4.07	4.00	4.14	3.92	4.03
2. Effectiveness of audiotape in preparing you to teach	3.50	3.50	3.43	4.17	3.65
3. Effectiveness of workbook in familiarizing instructor with student materials	4.29	4.14	4.43	---**	4.29
4. Usefulness of workbook in developing teaching competencies	3.36	3.86	4.21	---**	3.80
5. Effectiveness of combined module materials in preparing you to teach	4.14	4.29	4.21	---**	4.21
6. Hours spent on each module	7.64	6.50	5.82	4.50	6.12

*Means are based on five point scales with a 1 indicating an extremely negative reaction and 5 indicating an extremely positive reaction.

**Since there was no workbook for Module IV, means for questions 3-5 were not included in the table.

Phase Two General Questions

The Phase Two survey concluded with a series of general questions, including some specific items on the problem areas which surfaced during the Phase One evaluation. First, instructors were asked if switching back and forth between the various program materials presented any problems. Seven instructors responded in the affirmative. Some of the comments included:

> "Too many different parts. Notebook type of package would be more effective and provide easier organization of material."

> "Requires too much working area..."

> "Very distracting to have to organize and keep track of all the materials."

Based on both the Phase One and Phase Two evaluation, it was clear that the IOC materials would have to be reorganized in some fashion that would eliminate the confusion and burden of switching back and forth.

Secondly, instructors were asked to rate the quality of the four audiotape recordings in terms of such elements as content, organization and narration. The mean response for this item, 4.50, approached the excellent (5.0) response.

Several instructors, in both the first and second phases of the evaluation, indicated that a business, management or behavioral science background would be helpful to those teaching the MSP. More specifically, some suggested a reference list on management be included in the IOC. Instructors were asked how useful they might find such a list in preparing them to teach the MSP. The average rating on this item, 4.07, revealed that respondents thought a reference list would be very useful. Instructors commented that references could be used to provide training in current management techniques, and could give them a more solid background. They remarked that students could also benefit from such a list. Consequently, it was recommended to the developer that a reference list on current management theory and techniques be added to the IOC.

In addition to questions on the usefulness of a reference list, instructors were asked to describe any other administrative aids they thought might be helpful to teach the course more effectively. Four

instructors recommended that a set of slides or transparencies outlining the essential management elements taught in each module accompany the IOC. This was the only administrative aid other than the reference list suggested by more than one instructor. Further discussion of this recommendation follows in the next section of this report.

Just before the Phase One evaluation, the developer prepared a training guide to identify and sequence the steps needed to prepare the instructor to teach the MSP. Instructors were asked to indicate how effective this guide was in accomplishing the above objectives. The mean response for this item was 4.14; the training guide was judged to be effective in helping instructors through the self-instructional course.

Lastly, two scale items were included to obtain an overall evaluation of the IOC. First, instructors were asked how effective the IOC was in preparing them to teach the MSP. The mean response to this item was 4.43 on a five-point scale, indicating that instructors thought the IOC was very effective in this regard. Secondly, instructors were asked to what degree they would recommend, based on what they learned from completing the MSP, the program be taught as part of their ROTC curriculum. The mean for this question was 4.29, indicating they would highly recommend such a course of action.

Conclusions and Recommendations

The IOC was well received by the 14 instructors who participated in the evaluation. As one instructor commented:

> "I enjoyed participating in the program. It was a
> valuable refresher as well as a new challenge."

The various components of the IOC all received high ratings on the Phase Two evaluation scale items. Verbal comments obtained during the Phase One evaluation and written comments gathered from the Phase Two surveys were generally positive.

Although there were some minor criticisms, only one major problem area was identified and a few suggestions for improvement were given. The problem area about which the majority of instructors complained concerned the burden and confusion of switching back and forth between the four tapes, and the manuals, workbooks and student modules required to complete the IOC. After discussion with the developer it was decided to combine the workbook materials for each of the first three modules with the student materials for each into one manual. Since most of the switching was between the workbook and student modules, it was felt that this change would eliminate much of the confusion of switching back and forth. To further eliminate confusion, every effort was made to clearly identify each of the IOC program elements in the training guide.

The remaining suggestions for improvement led to the following outcomes:

1. As suggested, a reference list on management theory and principles was added to the IOC as an appendix in the training manual.

2. Four instructors suggested that a series of slides or transparencies accompany the IOC. However, the developer pointed out that materials already contained in the MSP and IOC can readily be made into slides or view-graphs at the ROTC school or region. Consequently, there are no immediate plans for the production of additional audiovisual aids.

On the basis of the feedback from the User's test, ARI, TRADOC and Development Dimensions International concluded that the IOC, as modified, was ready for implementation. The availability of such a training package for instructors removed the last obstacle to full implementation of the Management Simulation Program. Thus, as of school year 1978-79, the MSP is an operational instructional program available throughout the Army ROTC system.

APPENDIX A: USER'S TEST FOR MANAGEMENT SIMULATION PROGRAM
Instructor's Orientation Course

PART I - TELEPHONE SURVEY

A. Questions for Videotape

1. Was the videotape useful in giving you a general overview of the Management Simulation Program? Explain.

2a. Now that you have seen the videotape, in your opinion what are some of the positive aspects of the Management Simulation Program?

b. Now that you have seen the videotape, in your opinion, what are some of the negative aspects of the Management Simulation Program?

3. Were there any deficiencies in the videotape itself? If so, how might these deficiencies be corrected?

4. Based on the videotape, would you recommend that the Management Simulation Program be taught as part of your ROTC curriculum? Explain.

B. Questions for Specific Audiotape and Workbook Sections

Note: Questions repeated for each of the four modules.

1. Was the audiotape effective in preparing you to teach this module of the Management Simulation Program? Explain.

2. Was the material contained in the workbook effective in preparing you to teach this module of the Management Simulation Program? Explain.

3. Now that you have completed the training materials for this module, do you feel adequately prepared to teach this module? Explain.

4. Do you have any suggestions for improving any of the instructor training materials for this module? Explain in detail.

C. General Questions for all audiotapes

1. Did you find switching back and forth between the various program materials at all confusing? Explain.

2. Are there any general aspects of the tape itself that might be improved? Include comments on narration, length of tapes, quality of recording, etc.

APPENDIX B

USER'S TEST FOR MANAGEMENT SIMULATION PROGRAM,
INSTRUCTOR'S TRAINING PACKET
PHASE II
Part II - Mail Survey

General Instructions

Below are a series of questions we would like you to answer in
evaluating the Instructor Training Packet of the Management Simulation
Program.   Most of these questions can be answered by circling the
appropriate response on a 5-point scale.   On some of these items, a
high number represents a favorable evaluation; while on others a high
number represents a negative evaluation.   Therefore, please exercise
caution in responding to these items.

For the remaining items, simply respond as indicated.

When you have completed this questionnaire, please mail it to the
following address:

    Commander
    U.S. Army Research Institute
    ATTN: PERI-IL (Dr. Wellins)
    5001 Eisenhower Avenue
    Alexandria, Virginia 22333

A. DEMOGRAPHIC INFORMATION

1. Name_____

2. Rank_____

3. Institution_____

4. Primary MOS_____

5. Years in the Army_____

6. Have you had any educational experience in behavioral sciences, management or business? If so, please specify.

7. Did you have any exposure to the Management Simulation Program before the materials were sent to you for this test? If so, please specify.

8. Had you taught the Mangement Simulation Program before the materials were sent to you for this test? If so, please specify which modules you taught, and at what M.S. level.

B. QUESTIONS FOR VIDEOTAPE

1. How informative was the videotape in giving you a general overview of the Management Simulation Program?

1	2	3	4	5
extremely informative		moderately informative		not at all informative

2. How interesting did you find the videotape?

1	2	3	4	5
not at all interesting		moderately interesting		extremely interesting

3. I thought the quality of the videotape itself was (consider such elements as audio and video content and presentation, editing and videotape length):

1	2	3	4	5
excellent		adequate		poor

4. Based on the videotape, to what degree would you recommend the Management Simulation Program be taught as part of your ROTC curriculum?

1	2	3	4	5
not at all recommend		moderately recommend		strongly recommend

5. Please provide any general comments you have about the videotape. These may include, but are not limilted to, comments on positive and negative aspects of the videotape and recommendations for change.

C. MODULE I EVALUATION

1. To what extent was the audiotape useful in guiding you through the materials for Module I?

     1   2   3   4   5
   extremely   moderately   not at all
    useful   useful   useful

2. How effective was the information contained in the audiotape in helping to prepare you to teach Module I?

     1   2   3   4   5
   not at all   moderately   extremely
    effective   effective   effective

3. How effective were the workbook activities in familiarizing you with the student materials in Module I?

     1   2   3   4   5
   extremely   moderately   not at all
   effective   effective   effective

4. How useful were the workbook activities in developing the competencies required to teach Module I effectively?

     1   2   3   4   5
   not at all   moderately   extremely
    useful   useful   useful

5. How effective were the Instructor Orientation materials (audiotape and workbook) in preparing you to teach this module?

     1   2   3   4   5
   extremely   moderately   not at all
   effective   effective   effective

6. I spent approximately _____ hours in completing the materials for Module I.

D. MODULE II EVALUATION

   1. To what extent was the audiotape useful in guiding you through the materials for Module II?

1	2	3	4	5
extremely		moderately		not at all
useful		useful		useful

   2. How effective was the information contained in the audiotape in helping to prepare you to teach Module II?

1	2	3	4	5
not at all		moderately		extremely
effective		effective		effective

   3. How effective were the workbook activities in familiarizing you with the student materials in Module II?

1	2	3	4	5
extremely		moderately		not at all
effective		effective		effective

   4. How useful were the workbook activities in developing the competencies required to teach Module II effectively?

1	2	3	4	5
not at all		moderately		extremely
useful		useful		useful

   5. How effective were the Instructor Orientation materials (audiotape and workbook) in preparing you to teach this module?

1	2	3	4	5
extremely		moderately		not at all
effective		effective		effective

   6. I spent approximately _____ hours in completing the materials for Module II.

E. MODULE III EVALUATION

1. To what extent was the audiotape useful in guiding you through the materials for Module III?

1	2	3	4	5
extremely useful		moderately useful		not at all useful

2. How effective was the information contained in the audiotape in helping to prepare you to teach Module III?

1	2	3	4	5
not at all effective		moderately effective		extremely effective

3. How effective were the workbook activities in familiarizing you with the student materials in Module III?

1	2	3	4	5
extremely effective		moderately effective		not at all effective

4. How useful were the workbook activities in developing the competencies required to teach Module III effectively?

1	2	3	4	5
not at all useful		moderately useful		extremely useful

5. How effective were the Instructor Orientation materials (audiotape and workbook) in preparing you to teach this module?

1	2	3	4	5
extremely effective		moderately effective		not at all effective

6. I spent approximately _____ hours in completing the materials for Module III.

7. Please provide any general comments you have about the Instructor Orientation materials for Module II. These may include, but are not limited to, comments on positive and negative aspects of the materials and recommendations for change.

F. MODULE IV EVALUATION

1. To what extent was the audiotape useful in guiding you
    through the materials in Module IV?

    1   2   3   4   5
    extremely   moderately   not at all
     useful   useful   useful

2. How effective was the information contained in the
    audiotape in helping to prepare you to teach Module IV?

    1   2   3   4   5
    not at all   moderately   extremely
    effective   effective   effective

3. I spent approximately _____ hours in completing the
    materials for Module IV.

4. Please provide any general comments you have about the
    Instructor Orientation materials for Module IV. These
    may include, but are not limited to, comments on positive
    and negative aspects of the materials and recommendations
    for change.

G. GENERAL QUESTIONS ON INSTRUCTOR ORIENTATION MATERIALS

    1a. Did switching back and forth between the various program materials present any problems?

            ____YES   ____NO

    b. If you answered "yes" to the above question, please explain what these problems were and indicate how serious you found them to be.

    2. I thought the quality of the audiotape recording (in terms of such elements as content, organization and narrative) was:

        1   2   3   4   5
       poor   adequate   excellent

    3a. How useful would you find a reference list of readings on the topic of management in helping you prepare to teach this course?

        1   2   3   4   5
   extremely   moderately   not at all
    useful   useful   useful

    b. Please provide here any comments you have on how such a list might be used.

4. What further administrative aids, if any, do you need to teach the course effectively?

5. Overall, how effective is the Instructor Orientation Course in preparing you to teach the Management Simulation Program?

    1   2   3   4   5
    not at all   moderately   extremely
    effective   effective   effective

6. On the basis of what you have learned about the Mangement Simulaton Program (MSP) by completing the Instructor Training Packet, to what degree would you recommend the MSP be taught as part of your ROTC curriculum?

    1   2   3   4   5
    strongly   moderately   not at all
    recommend   recommend   recommend

7. How effective was the "Training Guide to Instructor Orientation Course" in identifying and sequencing the steps needed to prepare you to teach the Management Simulation Program?

    1   2   3   4   5
    not at all   moderately   extremely
    effective   effective   effective

8. Please provide below any additional comments you have about the Instructor Training Packet. Use the back of this sheet if extra space is needed.